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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,642	07/29/2003	John W. Evans	97541.00022	6851

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EXAMINER	
OGDEN JR, NECHOLUS	
ART UNIT	**PAPER NUMBER**
1751	
MAIL DATE	**DELIVERY MODE**
09/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Supplemental Office Action Summary	Application No.	Applicant(s)	
	10/629,642	EVANS, JOHN W.	
	Examiner	Art Unit	
	Necholus Ogden	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16,18-42 and 45-48* is/are pending in the application.

4a) Of the above claim(s) *18-25 and 33-42* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16,26-32 and 45-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Amendment

Claim Rejections - 35 USC § 112

1. Claims 7, 16 and 32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The aforementioned claims state that the propylene glycol is present in an amount greater than 98.5% by weight; however, the Examiner cannot find support for this assertion. Applicant appears to have support for greater than 99.0% by weight.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-5, 8-12, 14, 26, 28-20, and 45-46 and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 89/09806 to Reny et al.

Reny et al disclose a coolant composition comprising at least 90% by weight of an alkylene glycol and a corrosion inhibiting amount of an inhibitor comprising (a) from 0.02 to 4 parts by weight of an azole, (b) from 0.05 to 3 parts by weight of a molybdate salt and (c) from 0 to 3 parts by weight of phosphoric acid (page 3, lines 1-11). Reny et

al further teach that their coolant composition most preferably contains essentially no water (pg. 5, lines 28-34).

As Reny et al teach all of the instantly required it is considered anticipatory.

Reny et al, however, do not specifically teach with sufficient specificity coolant compositions comprising less than 0.5% by weight of water.

It would have been obvious to one of ordinary skill in the art to decrease the amount of water present in example 1 of Reny et al because Reny et al specifically teach that it is preferred that the alkylene glycol is used with essentially no water. Moreover, less than about 1.0 weight percent of water reads on zero or less than 0.5% by weight (page 5, lines 30-35). Accordingly, absent a showing to the contrary, it would have been obvious to one of ordinary skill in the art to comprise a composition with no water or less than 0.5% by weight of water in view of the teachings of Reny et al.

1. Claims 1-16, 26-32 and 44-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chemical Abstracts 120:195478 to Coughenour et al or Chemical Abstracts 116:86516 to Dingley or Evans (5,031,579), each in view of Mascioli et al or Greaney (5,422,026) .

Coughenour et al disclose the use of non-aqueous propylene glycol as an engine coolant (see abstract).

Dingley disclose the use of monoproplyene glycol as the entire engine coolant (see abstract).

Evans '579 discloses a substantially anhydrous coolant comprising propylene glycol (col. 5, lines 50-53) and specifically teaches that said method comprises substantially no water (col. 6, lines 1-3).

Neither Coughenour et al nor Dingley nor Evans '579 disclose the inclusion of molybdate, nitrate or an azole compound.

Mascioli et al disclose an antifreeze composition comprising propylene glycol, sodium molybdate, sodium nitrate, and tolyltriazole (table 3, of example 1).

Greaney disclose an antifreeze composition comprising propylene glycol, sodium molybdate, sodium nitrate and tolyltriazole (table 3 example 1).

It would have been obvious to one of ordinary skill in the art to add the molybdate, nitrate and tolyltriazole components of either Mascioli et al or Greaney to the propylene glycol coolants of Coughenour et al or Dingley or Evans '579 because Mascioli et al or Greaney teach that molybdates, nitrates, and tolyltriazole are effective corrosion inhibitors for propylene glycol coolants, and it appears that the propylene glycol coolants of Coughenour et al or Dingley or Evans '579 would benefit from the corrosion inhibition of the additives disclosed by Mascioli et al or Greaney, absent a showing to the contrary.

2. Claims 1-5, 8-11, 13-14, 26-27, 29-32, 45 and 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood (4,455,248).

3. Wood teaches a specific combination of corrosion inhibitors for glycol based antifreeze formulations, which provides protection of aluminum from corrosion under high temperature service conditions. Wood further teaches that said formulations

comprise glycols such as ethylene glycol and propylene glycol and mixtures thereof (col. 2, lines 47-69) and optionally contain little or no water, wherein it is suggested that Woods is non-aqueous. Wood teaches that said formulations contain as little as 0.1 parts for every 100 parts by weight of alcohol, which would fall within the amount permissible by the definition of non-aqueous. Wood further comprises corrosion inhibitors such as azoles, nitrates and silicates in an amount from at least 0.05 parts by weight (column 4, lines 24-43).

4. Wood suggest the claimed components in their requisite proportions in the broad teachings and therefore it would have been obvious to the skilled artisan to comprise the component to specifically teach the claimed invention in the absence of a showing to the contrary.

Response to Arguments

5. Applicant's arguments 3-07-2007 have been fully considered but they are not persuasive.

6. Applicant argues that the specification as originally filed fully supports the claimed range limitations and is not new matter.

7. The examiner contends that applicant's specification does not fully support the greater than 98.5% limitation and each embodiment represented therein because the specification does not clearly disclose to the skilled artisan that applicant considered this specific data point as part of their invention. See Purdue Pharma L.P. v. Faulding Inc., 230 F.3d 1320, 1328, 56 USPQ2d 1481, 1487 (Fed. Cir. 2000).

Applicant argues that Reny et al examples comprise les than 0.5% by weight of water and the addition of phosphoric acid. Further, applicant states that Reny does not teach or suggest a fluid that contains no additive that require the presence of added water in the fluid now recited by the instant claims.

The examiner maintains, however, that Reny et al specifically teach that it is preferable that the alkylene glycol is used with essentially no water (page 5, lines 28-24), wherein it appears that "essentially no water" would encompass amounts of less than 0.5%. Moreover, Reny exemplifies tolyltriazole and sodium molybdate as corrosion inhibitors (examples 1-2). Moreover, page 3, lines 1-15 suggest compositions that contain no water and thus, these compositions do not contain additives that require water in the fluid to dissolve the additive as recited by the instant claims. The reference has been read in context and the Examiner believes that the composition is complete. Again, Reny et al states that the alkylene glycol is used with essentially no water (page 5, lines 25-45). Additionally, the Examiner asserts that the Reny et al reference clearly teaches composition that contain little or not water as indicated on page 9, where compositions containing less than 1.0% by weight water are disclosed. Also, with respect to Reny et al containing from 0 to 3.0 parts by weight of phosphoric acid. In response, note that, Reny et al specifically, teach embodiments which contain no additives that require water in the heat transfer fluid to dissolve the additive or to enable the additive to function as recited by the instant claims.

Applicant further argues that Reny teach heat transfer fluids containing from 0 to 3 weight parts of phosphoric acid.

The examiner contends that Reny et al specially teach embodiments containing no phosphoric acid and thus, specifically teach embodiments which contain no additives that require water in the heat transfer fluid to dissolve the additive or to enable the additive to function as recited by the instant claims.

Applicant argues that Coughenour's statements of "Non-aqueous propylene glycol demonstrates extremely good engine cooling corrosion protection and cylinder linear cavitation depression" suggest that there is no need for any coolant additive.

The examiner respectfully disagrees and contends that the arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997) ("An assertion of what seems to follow from common experience is just attorney argument.

Applicant further argues that one of ordinary skill in the art, based on the Evans '579 patent, would not have used a non-buffered propylene glycol composition which also included corrosion inhibitors additives."

The examiner contends and respectfully disagrees because it is the examiners positions, however, that it appears a buffer is not required to be employed in a composition comprising propylene glycol and either a molybdate, nitrate or azole as shown by Mascioli et al (5,240,631). Note, that the composition of Mascioli et al contains propylene glycol, a molybdate, a nitrate and tolyltriazole, and that no buffer is required (Table 1, column 3, lines 20-30). It is acknowledged that Mascioli et al teach that an alkali metal hydroxide is employed to provide a final pH of 7-10 for concentrate

plus water coolant formulation (col. 2, lines 49-51), however the inclusion of the alkali metal hydroxide appears to be limited to the situation where the concentrate is diluted with a significant portion of water. Therefore, Evans does suggest applicant's claimed invention in view of the Mascioli et al.

Applicant states that Mascioli et al or Greaney et al teach the use of corrosion inhibitors in aqueous compositions and they require additive that require water to function.

The examiner respectfully disagrees and contends that Mascioli et al or Greaney et al et al each teach that the water content is in small amounts from 1 to 5% as compared to applicant's less than 0.5%, however, Mascioli et al or Greaney et al are relied upon to only to show that the claimed "propylene glycol soluble additives" are well known in the art for use within glycol based coolant compositions.

Applicant argues that since Wood necessarily teaches the use of sodium silicate, this would necessitate the addition of sufficient water for the sodium metasilicate to dissolve and remain in solution, i.e., in order for the sodium metasilicate to function. Note that, while the sodium metasilicate may be soluble in alcohol, Wood clearly suggest embodiments which contain sodium metasilicate and also may contain no water; Wood teaches that the composition may be formulated as concentrate compositions which contain no water (col. 3, lines 1-20). The fact that sodium metasilicate is not soluble in water is not relevant to the teachings of Wood which clearly suggest concentrates compositions which contain little or not water and are the same as the non-aqueous compositions recited by the instant claims. Clearly, Wood

teaches that sodium metasilicate can function in the composition without the presence of water as recited by the instant claims.

With respect to the Declaration filed under 37 CFR 1.132, the Examiner contends that the Declaration is not sufficient to overcome the references of record. The Declaration reiterates Applicant's arguments and these arguments have been addressed and maintained as set forth above. Furthermore, with respect to Reny et al, the Declaration sates that it is well known to those skilled in the art that phosphoric acid buffers require the presence of water for ionization, a requirement for it to be able to act as an acid. Note, that Reny et al specifically teach compositions containing no phosphoric acid and no added water. See examples 1,2 C1 and C2 on page 9 of Reny et al.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Necholus Ogden whose telephone number is 571-272-1322. The examiner can normally be reached on M-T, Th-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on 571-272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Necholus Ogden
Primary Examiner
Art Unit 1751

No
5-28-2007